CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/W.No.14/NS/CSR-04/024g/CEMENT/2016-17 Date: 28.04.2016

TEST REPORT ON CEMENT

* CUSTOMER	:	**Asst. Executive Engineer**, T. Dasarahalli Sub Division, BBMP, Bangalore.
*AGENCY	:	**Mr. N. Shivananda,** No.35, 2nd Cross, Defence Colony, Hesaraghatta Main Road, Bagalagunte, Bangalore - 73.
*NAME OF THE WORK	:	Improvements to drains at Bagalagunte Main Road left side in Bagalagunte Ward No.14, BBMP, Bangalore.
*REFERENCE	:	BBMP/DZ/AEE/TDSD/PR/2016-17 Dated: 27.04.2016
SAMPLE ID	:	Cement
SAMPLE RECEIVED ON	:	27.04.2016
PERIOD OF TESTING	:	27.04.2016 to 28.04.2016

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The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988(RA-2009)	28.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988(RA-2009)	145 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988(RA-2009)	480 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

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⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

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Job No.: CTCE/BBMP/W.No.14/NS/CSR-04/024g/SAND-Gradation/2016-17 : 28.04.2016

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. N. Shivananda,**
No.35, 2nd Cross, Defence Colony, Hesaraghatta Main Road, Bagalagunte, Bangalore - 73.

*** Name of Work** : Improvements to drains at Bagalagunte Main Road left side in Bagalagunte Ward No.14, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2016-17 Dated: 27.04.2016

Technical Reference : IS : 2386 Part 1 - 1963 RA-2007

Sample ID : Fine Aggregates

Sample Received on : 27.04.2016

Date of Testing : 28.04.2016

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Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	94.00	90-100	90-100	90-100	95-100
2.36	75.00	60-95	75-100	85-100	95-100
1.18	55.00	30-70	55-90	75-100	90-100
600 Micron	30.50	15-34	35-59	60-79	80-100
300 Micron	11.50	5-20	8-30	12-40	15-50
150 Micron	5.50	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

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Remarks : This sample is under Zone-I specific limits.

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Job No.: CTCE/BBMP/W.No.14/NS/CSR-04/024g/AGG/GR/2016-17 : 28.04.2016

TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. N. Shivananda,**
No.35, 2nd Cross, Defence Colony, Hesaraghatta Main Road, Bagalagunte, Bangalore - 73.

*** Name of Work** : Improvements to drains at Bagalagunte Main Road left side in Bagalagunte Ward No.14, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2016-17 Dated: 27.04.2016

Technical Reference : IS : 2386 Part 1 -1963 RA-2007

Sample ID : Coarse Aggregates (40mm)

Sample Received on : 27.04.2016

Date of Testing : 28.04.2016

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Total Wt. of Aggregates in gms= **7000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	97.14	95-100	85-100
20	39.29	30-70	0-20
10	19.29	10-35	0-5
4.75	3.57	0-5	-

* Information is furnished by the Customer/Representative

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Remarks : This sample is under Graded specific limits.

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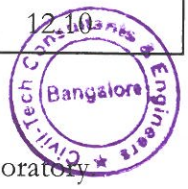
Job No.: CTCE/BBMP/W.No.14/NS/CSR-04/024g/CUBE/2016-17 02.06.2016

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

* Customer	: **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	: **Mr. N. Shivananda,** No.35, 2nd Cross, Defence Colony, Hesaraghatta Main Road, Bagalagunte, Bangalore - 73.
* Name of the work	: Improvements to drains at Bagalagunte Main Road left side in Bagalagunte Ward No.14, BBMP, Bangalore.
* Reference	: BBMP/DZ/AEE/TDSD/PR/2016-17 Dated: 27.04.2016
* Sample ID	: Cement Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
* Grade of Concrete	: M_{10}
Compressive Strength as on	: 28th day
Sample Received on	: 02.06.2016

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	05.05.2016	02.06.2016	8.198	259.3	11.52
2	05.05.2016	02.06.2016	8.265	268.3	11.92
3	05.05.2016	02.06.2016	8.390	272.3	12.10

* Information is furnished by the Customer/Representative



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Job No.: CTCE/BBMP/W.No.14/NS/CSR-04/024g/Pre Cast Slab/2016-17 12.05.2016

TEST REPORT ON CONCRETE CORE (PRE CAST SLAB)

*** Name of Customer** : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

*** Name of Agency** : **Mr. N. Shivananda,**
No.35, 2nd Cross, Defence Colony, Hesaraghatta Main Road, Bagalagunte, Bangalore - 73.

*** Name of work** : Improvements to drains at Bagalagunte Main Road left side in Bagalagunte Ward No.14, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2016-17 Dated: 27.04.2016

Techinical Reference : IS:516-1959 (Reaffirmed 2008), SP-24:1983.

Sample ID : Pre Cast Slab

Sample Received on : 07.05.2016

Date of Testing : 12.05.2016

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Sl. No.	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	50.00	80.00	0.395	2514.65	1.60	0.960	32.30	16.45	17.77	17.06	21.32
2	50.00	81.00	0.402	2527.62	1.62	0.965	32.60	16.60	17.93	17.30	21.63
3	50.00	82.00	0.412	2558.90	1.64	0.970	33.50	17.06	18.43	17.87	22.34

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